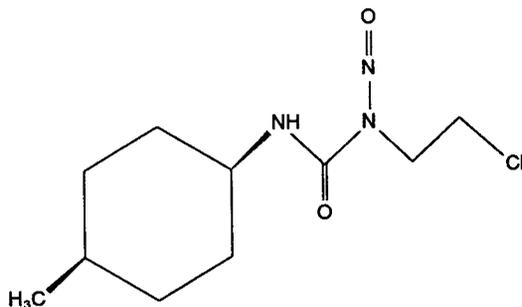


SEMUSTINE

NSC - 95441



Chemical Name:

1-(2-Chloroethyl)-3-(4-methylcyclohexyl)-1-nitrosourea

Other Name: Methyl CCNU

Molecular Formula: C₁₀H₁₈ClN₃O₂

M.W. : 247.7

Approximate Solubility:

(mg/mL)

| | |
|------------------|--------|
| Water | 0.09 |
| 0.1 N HCl | 0.09 |
| 0.1 N NaOH | 0.09 |
| 10% Ethanol | 0.10 |
| Absolute Ethanol | 100.00 |
| DMSO | 250.00 |
| Chloroform | 667.00 |

Stability:

Bulk:

A sample stored at room temperature for 30 days showed 4% decomposition (UV).

Solution:

A refrigerated solution in 10% EtOH decomposed 2% in 6 hours while a solution at room temperature showed 25% decomposition in 6 hours (UV). Solutions in methanol were also found to be unstable by UV analysis.

Ultraviolet Absorption:

(MeOH)

$$\lambda_{\max} = 229 \pm 2\text{nm}$$

$$\epsilon = 6,000 - 6,190$$

High Performance Liquid Chromatography:

- Column:** μ Bondpak C₁₈, 300 x 3.9 mm i.d.
- Moble Phase:** CH₃CN/1% HOAc (aq), 70/30, v/v
- Flow Rate:** 1.0 mL/min
- Detection:** UV at 254 nm
- Sample Preparation:** Weighed amounts of the test sample (approximately 20 mg) in 10 mL flasks are dissolved in internal standard solution. These solutions are diluted 3 to 25 mL to give a concentration of 0.25 mg/mL.
- Internal Standard:** Fluoranthrene (0.08 mg/mL in acetonitrile)
- Retention Volume:** 5.5 mL (NSC- 95441)
9.0 mL (I.S.)